

# UNITED STATES PATENT AND TRADEMARK OFFICE



UNITED STATES DEPARTMENT OF COMMERCE United States Patent and Trademark Office Address: COMMISSIONER FOR PATENTS P.O. Box 1450 Alexandria, Virginia 22313-1450 www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO. CONFIRMATION NO. 68.0452 4806		
10/710,807	08/04/2004	Gerhard Schoonderbeek			
35204 SCHLUMBER	7590 02/09/2007 LGER RESERVOIR COMI	EXAMINER			
14910 AIRLIN	IE ROAD	THOMPSON, KENNETH L			
ROSHARON,	TX 77583	ART UNIT	PAPER NUMBER		
		•	3672		
SHORTENED STATUTOR	RY PERIOD OF RESPONSE	MAIL DATE	DELIVERY MODE		
3 MC	ONTHS	02/09/2007	PAPER		

Please find below and/or attached an Office communication concerning this application or proceeding.

If NO period for reply is specified above, the maximum statutory period will apply and will expire 6 MONTHS from the mailing date of this communication.

		Application	n No.	Applicant(s)				
		10/710,80	7	SCHOONDERBEEK ET AL.				
	Office Action Summary	Examiner		Art Unit				
_	-	Kenneth T	·	3672				
Period fo	The MAILING DATE of this communication a or Reply	appears on the	cover sheet with the c	orrespondence ac	idress			
WHIC - Exte after - If NC - Failu Any	ORTENED STATUTORY PERIOD FOR REP CHEVER IS LONGER, FROM THE MAILING ansions of time may be available under the provisions of 7 CFR SIX (6) MONTHS from the mailing date of this communication. operiod for reply is specified above, the maximum statutory perion re to reply within the set or extended period for reply will, by state reply received by the Office later than three months after the mained patent term adjustment. See 37 CFR 1.704(b).	DATE OF TH 1.136(a). In no eve od will apply and wil tute, cause the appli	IS COMMUNICATION  nt, however, may a reply be tim  expire SIX (6) MONTHS from cation to become ABANDONE	N. nely filed the mailing date of this of D (35 U.S.C. § 133).				
Status								
1)	Responsive to communication(s) filed on 17	November 20	006.					
/	•	his action is no						
3)								
,—	closed in accordance with the practice under Ex parte Quayle, 1935 C.D. 11, 453 O.G. 213.							
Disposit	ion of Claims							
4)⊠	Claim(s) <u>1-19,21 and 23-30</u> is/are pending in	n the applicati	on.					
	4a) Of the above claim(s) is/are withdrawn from consideration.							
5)	Claim(s) is/are allowed.							
6)⊠	)⊠ Claim(s) <u>1-15, 21, 23-30</u> is/are rejected.							
7)🖂	Claim(s) 16-19 is/are objected to.							
.8)□	Claim(s) are subject to restriction and	d/or election re	equirement.					
Applicat	ion Papers							
9)⊟	The specification is objected to by the Exami	iner.						
10)	The drawing(s) filed on is/are: a) a	ccepted or b)	objected to by the	Examiner.	•			
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).								
	Replacement drawing sheet(s) including the corr	ection is require	ed if the drawing(s) is ob	jected to. See 37 C	FR 1.121(d).			
11) The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.								
Priority (	under 35 U.S.C. § 119							
12) Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f). a) All b) Some * c) None of:								
	1. Certified copies of the priority documents have been received.							
	2. Certified copies of the priority documents have been received in Application No							
	3. Copies of the certified copies of the priority documents have been received in this National Stage							
application from the International Bureau (PCT Rule 17.2(a)).  * See the attached detailed Office action for a list of the certified copies not received.								
See the attached detailed Office action for a list of the certified copies not received.								
Attachmer	ut(e)							
	ce of References Cited (PTO-892)		4) Interview Summary	(PTO-413)				
2) Notic	ce of Draftsperson's Patent Drawing Review (PTO-948)		Paper No(s)/Mail D	ate				
3) Information Disclosure Statement(s) (PTO/SB/08)  Paper No(s)/Mail Date  5) Notice of Informal Patent Application 6) Other:								

#### **DETAILED ACTION**

### Claim Objections

Claims 16-19 and 28-30 are objected to because of the following informalities:

The recitation "the aperture" in claim 16, line 5 and 6 should be changed to "at least one of said apertures", "each of said apertures", "apertures", or the like. Claims 17-19 depend from claim 16 and are likewise objected to. Appropriate correction is required.

Claim 28 should end with a period. Claims 29 and 30 depend from claim 28 and are likewise objected to

## Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless -

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Claims 1, 2 and 4-14 are rejected under 35 U.S.C. 102(b) as being anticipated by Breukelman, U.S. 2,897,897.

Regarding claims 1, 2 and 4-12, Breukelman discloses a casing having apertures (45) for produced fluid; an injection conduit (15,20; col. 2, lines 47-53) having apertures (25), graduated apertures (21; col. 3, lines 13-16), one-way valves (31) in some apertures (21) flush with the outer circumference, wherein the valve limits flow into the

conduit (col. 3, lines 20-26) and limits outward flow from the conduit (col. 4, lines 19-28) to a lesser degree than inward flow.

As to claims 13, Breukelman discloses cup packers (16,17) limiting wellbore cross-flow.

As to claims 14, Breukelman discloses in figure 3 the apertures (21) having an increasing diameter along the length of the conduit which creates a larger space between the smaller diameter apertures near the top portion than the space between the larger diameter apertures at the lower portion and limits fluid pressure surge.

Claims 1, 3, 21, 23-25 and 27 are rejected under 35 U.S.C. 102(b) as being anticipated by Patton et al., U.S. 4,258,788.

Patton discloses in figures 1 and 12 a conduit (4) isolating formation intervals with packers (7), axially spaced apertures (11), a one-way valve (32), a base pipe (9) and screen (38) covering the aperture.

Patton discloses in figure 6 injecting fluid through an aperture (11) with a varied concentrated area to the interior of the conduit having a check valve (15) and filter plate (21) and a spring (20) dampening.

Claim 15 is rejected under 35 U.S.C. 102(b) as being anticipated by Schroeder, Jr. et al., U.S. 5,127,474.

Schroeder, Jr. et al. discloses a housing (40,52) within radial ports (at 38) in a well conduit (22) having a plurality of apertures (26) and a valve member (48).

Claims 26 and 28-30 are rejected under 35 U.S.C. 102(b) as being anticipated by Bryan, U.S. 2,2147,305.

Bryan discloses a conduit (2) having a valve (21) therein, radial apertures (25) and a valve (26; 27, 28) meeting the first alternative of allowing flow from the exterior to the interior and limiting outward flow via a varied concentrated outlet port area (at 27).

Claims 26 is rejected under 35 U.S.C. 102(b) as being antipcated by Gray, U.S. 2,602,516.

Gray discloses a production conduit (36) apertures (at 14) radially spaced from the conduit longitudinal axis, a check ball valve (17) and seat (14) meeting the first alternative of allowing flow from the exterior to the interior and restricting flow from the interior to the exterior and a gland screen (15) covering the aperture.

## Response to Arguments

Applicant's arguments filed 17 November 2006 have been fully considered but they are not persuasive.

Applicants argue the prior art of Breukelman does not include communication with the surface via tubing an not with a target reservoir.

Breukelman discloses fluid communication with a producing oil well formations via the tubing.

Applicants argue the limitation "restricting flow" in claim 9 requires flow.

The claim does not require a restricted flow of fluid through the aperture and the prior art check valve restricts fluid from flowing.

## Allowable Subject Matter

Claims 16-19 would be allowable if rewritten or amended to overcome the objections set forth in this Office action.

#### Conclusion

Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Kenneth Thompson whose telephone number is 571 272-7037. The examiner can normally be reached on 7:00 am - 4:30 pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, David J. Bagnell can be reached on 571-272-6999. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272,1000.

5 February 2007

Kenneth Thomoson Primary Examiner Art Unit 3672